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Mineral Industry Surveys

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LEAD IN SEPTEMBER 1999

Domestic mine production, based upon the net quantity of lead recovered in the smelting of concentrate, decreased by 8% in August compared with production in July. Data on mine production in September were not available at the time of publication. Secondary refinery production remained essentially unchanged in September but was down by about 3% compared with production in September 1998. Reported consumption remained unchanged in September.

According to *Platt's Metals Week* published quotations, the average North American producer price and the average London Metal Exchange (LME) cash price (U.S. dollars) edged up slightly in September, increasing by 0.02% and 0.84%, respectively.

In North America, the lead supply remained tight and demand continued strong during September. Secondary lead producers were hopeful that the current supply shortage would be eased somewhat by the arrival of additional automotive batteries that had failed during recent periods of hot summer weather. Contributing to the supply shortage, Mexico's Peñoles Industrias SA de CV continued to operate its Torreón primary smelter-refinery at about 50% of capacity during the month (Metal Bulletin, 1999a, b). However, Mexico's federal environmental protection agency, Profepa, recently permitted Peñoles to increase production to 75% of capacity. A spokesman for Peñoles stated that production would be raised gradually to the 75% level (Mining Journal, 1999b). The European lead market remained depressed as lead producers awaited winter to increase the demand for lead in the automotive battery sector (Ryan's Notes, 1999).

National Defense Stockpile cash disposal (sale) of lead in September was 4,626 metric tons (5,099 short tons). The sale of lead in fiscal year 1999 (October 1998 through September 1999) was 54,433 metric tons (60,002 short tons).

The U.S. Department of Housing and Urban Development (HUD) issued its final rule on the requirements for notification, evaluation, and reduction of lead-based paint hazards in federally owned residential property and housing receiving Federal assistance. The rule implements Sections 1012 and 1013 of the Residential Lead-Based Paint Hazard Reduction Act of 1992, which is Title X of the Housing and Community Development Act of 1992. The requirements of this final rule are based on the practical experience of cities and States as well as others who have been controlling lead-based paint hazards in low-income, privately owned housing and public housing through HUD assistance. As a result of this ruling, all of HUD's Federal programs concerning lead-based paint requirements now are consolidated into a component of Title 24 of the Code of Federal Regulations (U.S. Department of Housing and Urban Development, 1999).

The U.S. Environmental Protection Agency (EPA) announced an extension of 45 days to the period for public comment on its proposed rule to lower the reporting threshold for lead and lead compounds under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and section 6607 of the Pollution Prevention Act of 1990. The proposed rule to which the extension applies also includes limitations on the reporting of lead when contained in certain alloys, as well as modifications to certain reporting exemptions and requirements for lead and lead compounds. As originally issued on August 3, 1999, the EPA was to have accepted comments on the proposed rule until September 17, 1999. Under the extension, the new closure date was changed to November 1, 1999 (U.S. Environmental Protection Agency, 1999).

A recent report released by the Chicago-based Battery Council International, anticipates significant growth in lead-acid battery usage during the next 5 years. As a result of the increased use of fiber optics, broadband communications systems, computer networks, and their basic need for backup power systems, industrial lead-acid battery demand is projected to double by 2005. By then, the backup battery power systems are expected to represent about 65% of the industrial battery market. Contributing to the increase in demand will be the development and installation of new data networks that will be carrying a significantly greater volume of traffic. Demand for lead-acid batteries in the automotive sector also is expected to increase appreciably during this period. Automotive manufacturers are producing vehicles with increased electrical demands. As a result, the automotive

manufacturers now are working with the lead-acid battery industry to produce dual-battery systems as well as higher voltage batteries to replace the 12-volt-size battery now being used (Battery Council International, September 13, 1999, Lead-acid batteries behind some of the most significant developments of the century, accessed November 16, 1999 at URL http://www.battery council.org/news-anniv.html).

The St. Louis-based Doe Run Co. has reported that its 10-year modernization plan for the La Oroya smelting and refining complex in Peru is proceeding on schedule, resulting in higher metal production. Doe Run purchased the complex from Peru's State-owned Empresa Minera del Centro del Perú in August 1997. According to a Doe Run spokesman, throughput at the facilities has increased by 15% for lead and 10% to 15% for zinc. Significant increases were also noted in the production of copper and silver (American Metal Market, 1999).

Canada's Camnor Resources Ltd. and Oromin Exploration Ltd. announced that a recently completed drilling program at the Cirque property in Alaska intersected high-grade volcanogenic massive sulfide mineralization. Drill results from the Discovery and Dol zones revealed up to 11.5% combined lead, zinc, and copper. The Cirque property is located in the Bonnifield District, 80 miles south of Fairbanks, AK. Camnor and Oromin have an option to acquire the property from Great American Exploration Inc., subject to a 3% net smelter return royalty (Mining Record, 1999).

Cominco American, a wholly owned subsidiary of Canada's Cominco Ltd., has reported the discovery of significant new zinc-lead mineralization 6 miles north of its Red Dog Mine in northwestern Alaska. Initial drilling results revealed intersections of mineralization grading up to 30% zinc and 6% lead. However, the results are preliminary in nature and are not conclusive evidence that an economic mineral deposit exists at the site (Cominco Ltd., August 26, 1999, news release, accessed November 18, 1999, at URL http://www.cominco.com/News/99archive/99-018-C.html). Drilling was continued in September at the new site but the onset of winter weather prevented any further drilling until next summer. Significant additional drilling will be required to fully determine the extent and nature of the deposit. The mineral zone remains open to the northeast, northwest, and southwest (Cominco Ltd., October 5, 1999, news release, accessed November 18, 1999, at URL http://www.cominco.com/News-Info/NEWS/99archive/99-020-C.html).

Australia's Western Metals recently revealed an exploration plan to extend the life of its Hellyer mining operation in Tasmania. The existing Hellyer orebody potentially will be depleted by mid 2000, but its modern processing facilities are valuable to Western Metals and suitable to be used advantageously beyond the life of the Hellyer Mine. Thus, Western has signed an agreement with Oceania Tasmania Pty Ltd. to conduct a drilling program at the Comstock project, 70 kilometers from the Hellyer Mine, during the next 4 months. Upon evaluation of the drilling results, Western will have the option of acquiring 70% of Comstock through a cash payment to Oceania. A spokesman for Western hoped that the exploration would lead to at least a 2-year mine life for Comstock that would provide an extended source of ore for the Hellyer processing facilities (Platt's Metals Week, 1999).

The first ore has been mined from Ireland's Lisheen zinc-lead mine in County Tipperary. Joint owners of the mine are Ivernia West Plc and Anglo American plc, the latter being the operator of the mine. According to an Ivernia West spokesman, the mined ore is being used to commission the mine's concentrator. At full concentrator capacity, the conventional flotation process is expected to yield 330,000 tons per year of zinc concentrates and 40,000 tons per year of lead concentrates from the processing of 1.5 million tons of ore (Mining Journal, 1999a).

References Cited

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Mining Journal, 1999a, First ore from Lisheen: Mining Journal, v. 333, no. 8549, September 17, p. 213.

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Mining Record, 1999, High-grade massive sulfides intersected on Cirque: Mining Record, v. 110, no. 37, September 15, p. 3.

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Ryan's Notes, 1999, European lead market depressed: Ryan's Notes, v. 5, no. 38, September 20, p. 4.

U.S. Department of Housing and Urban Development, 1999, Requirements for notification, evaluation and reduction of lead-based paint hazards in Federally owned residential property and housing receiving Federal assistance—Final rule: Federal Register, v. 64, no. 178, September 15, p. 50139-50231.

U.S. Environmental Protection Agency, 1999, Lead and lead compounds—Lowering of reporting thresholds—Community right-to-know toxic chemical release reporting—Extension of comment period: Federal Register, v. 64, no. 182, September 21, p. 51091-51093.

TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES 1/

(Metric tons)

	1998		1999		
	Year total	January - September	August	September	January - September
Production:					
Mine (recoverable)	481,000	323,000	43,600	NA	350,000 2/
Primary refinery	337,000	NA	NA	NA	NA
Secondary refinery:					
Reported by smelters/refineries	1,100,000	806,000	89,700	89,500	779,000
Estimated	--	13,700	907	904	11,600
Recovered from copper-base scrap e/	16,800	11,300	1,250	1,250	11,300
Total secondary	1,120,000	831,000	91,900	91,600	802,000
Stocks, end of period:					
Primary refineries	10,900 3/	XX	NA	NA	XX
Secondary smelters and consumers	77,300 3/	XX	68,400	65,200	XX
Imports for consumption:					
Ore and concentrates (lead content)	32,700	21,200	6,710	NA	9,430 2/
Refined metal	267,000	192,000	25,700	NA	180,000 2/
Consumption:					
Reported	1,630,000	1,130,000	130,000	129,000	1,180,000
Undistributed e/	--	35,000 r/	6,820 r/	6,810	62,300
Total	1,630,000	1,170,000 r/	136,000 r/	136,000	1,250,000
Exports (lead content):					
Ore and concentrates	72,400	61,600	10,700	NA	47,200 2/
Bullion	51,600	34,900	5,900	NA	41,500 2/
Materials excluding scrap	39,600	29,500	5,550	NA	26,200 2/
Ash and residues	9,030	6,130	86	NA	1,260 2/
TEL/TML preparations, based on lead compounds	3,180	2,490	59	NA	1,850 2/
Exports (gross weight): Scrap	99,200	71,500	9,970	NA	72,200 2/
Platt's Metals Week North American producer price (cents per pound)	45.27	45.49	43.72	43.73	43.74

e/ Estimated. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Includes data for January - August only; September data not available at time of publication.

3/ Stocks at end of year.

TABLE 2
MONTHLY AVERAGE LEAD PRICES

	North American producer price	LME		Sterling exchange rate
	cents/lb	$/metric ton	£/metric ton	dollars/£
1998:				
September	46.96	519.81	309.00	1.682252
January - September	45.49	539.06	326.51	1.650970
Year	45.27	528.22	318.86	1.657086
1999:				
June	43.70	495.75	310.81	1.595018
July	43.70	495.46	314.56	1.575086
August	43.72	502.66	312.97	1.606100
September	43.73	506.91	312.00	1.624686
January - September	43.74	508.18	314.97	1.613762

Source: Platt's Metals Week.

TABLE 3
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN SEPTEMBER 1999 1/

(Metric tons, gross weight)

Item	Stocks August 31, 1999	Net receipts	Consumption	Stocks September 30, 1999
Battery-lead	24,500	95,000	95,100	24,300
Soft lead	W	W	W	W
Drosses and residues	3,170	4,780	4,460	3,490
Other 2/	1,590	2,170	2,020	1,740
Total	29,200	102,000	102,000	29,600
Percent change from preceding month	XX	+1.2	+0.1	+1.1

W Withheld to avoid disclosing company proprietary data; included with "Other." XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes solder, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap not elsewhere classified.

TABLE 4
LEAD, TIN, AND ANTIMONY RECOVERED FROM LEAD-BASE SCRAP IN SEPTEMBER 1999 1/

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	49,000	--	--
Remelt lead	W	W	W
Antimonial lead	39,900	W	W
Other 2/	W	W	--
Total lead-base	89,500	105	439

W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Data are rounded to three significant digits.

2/ Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 5
CONSUMPTION OF LEAD IN THE UNITED STATES 1/

(Metric tons, lead content)

Uses	1998 Year total	1998 January - September	1999 August	1999 September	1999 January - September
Metal products:					
Ammunition, shot and bullets	52,800	29,600 r/	3,980	4,050	32,400
Brass and bronze, billet and ingots	3,460	2,780 r/	334 r/	316	2,850
Cable covering, power and communication and calking lead, building construction	5,980	4,530 r/	168	161	2,000
Casting metals	32,600	4,010 r/	380	384	3,540
Pipes, traps, and other extruded products	W	W	W	W	W
Sheet lead	18,700	12,900 r/	1,450	1,310	12,200
Solder	10,900	5,430 r/	1,100	701	7,150
Storage batteries, including oxides	1,430,000	1,010,000	117,000	117,000	1,070,000
Terne metal, type metal, and other metal products 2/	10,400	6,760 r/	183	185	1,870
Total metal products	1,560,000	1,080,000	125,000	124,000	1,340,000
Other oxides	(3/)	(3/)	(3/)	(3/)	(3/)
Miscellaneous uses	69,000	52,700 r/	5,020	4,980	48,800
Total reported	1,630,000	1,130,000	130,000	129,000	1,180,000
Undistributed consumption e/	--	35,000 r/	6,820 r/	6,810	62,300
Grand total	1,630,000	1,170,000 r/	136,000 r/	136,000	1,250,000

e/ Estimated. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Sheet lead."
1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Includes lead consumed in foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.
3/ Withheld to avoid disclosing company proprietary data; included with "Miscellaneous uses."

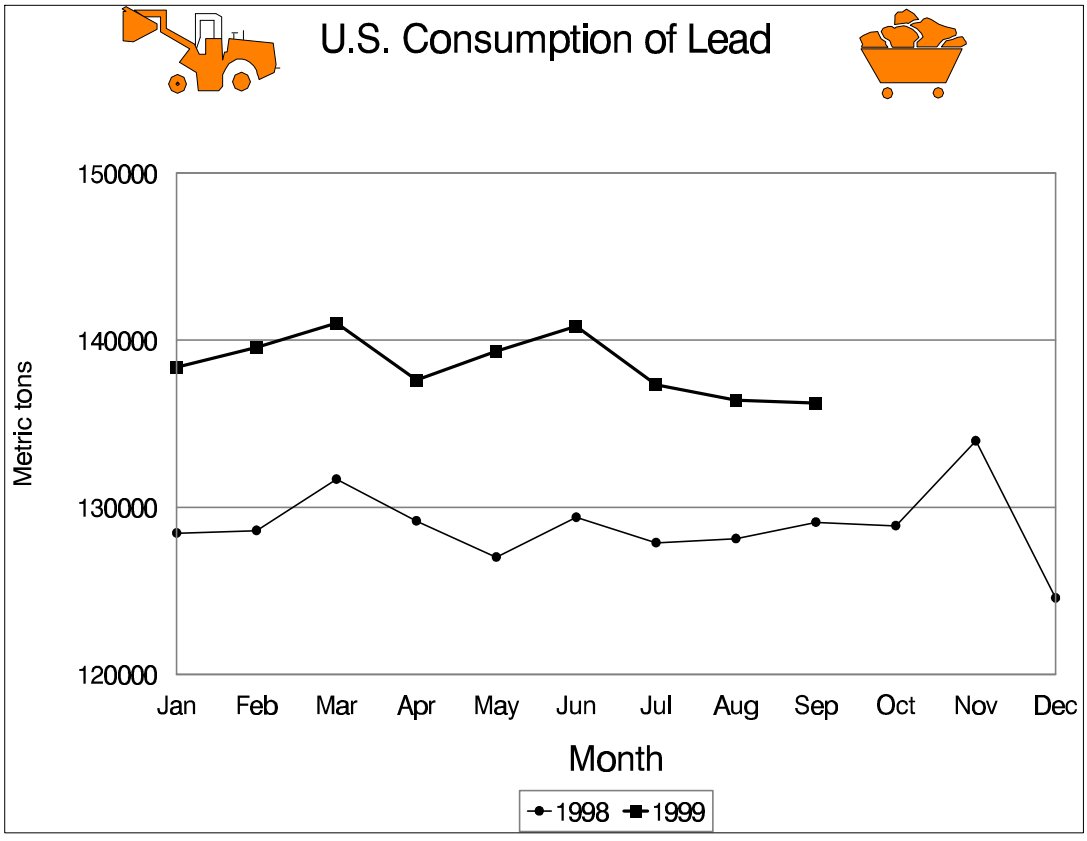

TABLE 6
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND
CONSUMPTION OF LEAD IN SEPTEMBER 1999 1/

(Metric tons, lead content)

Type of material	Stocks August 31, 1999	Net receipts	Consumption	Stocks September 30, 1999
Soft lead	30,200	70,600	74,600	26,100
Antimonial lead	30,800	33,000	32,000	31,800
Lead alloys	W	22,500	22,500	W
Copper-base scrap	W	236	236	W
Total	68,400	126,000	129,000	65,200

W Withheld to avoid disclosing company proprietary data; included in "Total."
1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 7
U.S. EXPORTS OF LEAD, BY CLASS 1/

(Metric tons)

	1998		1999		
	Year total	August	July	August	January - August
Lead content:					
Ore and concentrates	72,400	16,300	26,200	10,700	47,200
Bullion	51,600	4,050	4,340	5,900	41,500
Materials excluding scrap	39,600	2,810	4,590	5,550	26,200
Ash and residues	9,030	707	344	86	1,260
TEL/TML preparations, based on lead compounds	3,180	227	10	59	1,850
Total	176,000	24,100	35,500	22,300	118,000
Gross weight: Scrap	99,200	9,350	9,700	9,970	72,200

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 8
U.S. IMPORTS OF LEAD BY TYPE OF MATERIALS AND BY COUNTRY OF ORIGIN 1/

(Metric tons, lead content)

	General imports					Imports for consumption				
	1998		1999			1998		1999		
Country of origin	Year total	January - August	July	August	January - August	Year total	January - August	July	August	January - August
Ore, matte, etc.:										
Canada	32,000	32,000	--	(2/)	1,220	6,540	6,540	--	(2/)	(2/)
Mexico	--	--	230	806	1,580	--		230	806	1,580
Peru	35,800	20,400	515	882	4,140	18,500	3,990	--	193	193
Other	21,000	8,180 r/	47	5,990	19,400	7,670	4,890	--	5,720	7,660
Total	88,800	60,600	792	7,680	26,300	32,700	15,400	230	6,710	9,430
Base bullion:										
Dominican Republic	464	353	--	2	2	464	353	--	2	2
Pigs and bars:										
Australia	--	--	5,100	2,000	13,200	--	--	5,100	2,000	13,200
Canada	181,000	118,000	14,700	16,200	130,000	181,000	118,000	14,700	16,200	130,000
China	8,010	45	1,510	6,680	8,240	8,010	45	1,680	6,680	8,410
Germany	135	62	150	59	436	135	62	150	59	436
Mexico	63,600	47,100	935	528	22,000	63,600	47,100	935	528	22,000
Peru	11,400	4,900	--	--	2,650	11,400	4,900	--	--	2,650
Other	2,160 r/	1,010 r/	136 r/	211	3,480	2,160 r/	1,010 r/	136 r/	211	3,480
Total	267,000	171,000	22,500	25,700	180,000	267,000	171,000	22,700	25,700	180,000
Reclaimed scrap, including ash and residues	(2/)	(2/)	--	--	--	(2/)	(2/)	--	--	--
Grand total	356,000	232,000	23,300	33,400	207,000	300,000	187,000	22,900	32,400	190,000

r/ Revised.
1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Less than 1/2 unit.

Source: Bureau of the Census.